

determining a polymer concentration in the high molecular weight fraction using the concentration detector;

determining off-line the molar mass [in the high molecular weight fraction] using the molar mass detector on a diverted high molecular weight fraction; and

deriving an average molecular weight from the polymer concentration and the molar mass;

wherein the total analysis time is not greater than about 5 minutes per sample.

28. (twice amended) A method for the determination of polymer molecular weight, comprising:

providing a sample array comprising a plurality of spatially differentiated sites, each site comprising a polymer resin reaction product of a dipehnyl carbonate and [a dihydric phenol] bisphenol A;

preparing an analytical sample for each spatially differentiated site by dissolving the polymer resin reaction product in a suitable solvent;

injecting a known amount of each analytical sample into a flow analysis system comprising a chromatographic column, a concentration detector, and a molar mass detector;

effecting a minimally dispersive separation of each analytical sample with the chromatographic column to yield a high molecular weight fraction comprising polycarbonate oligomers and polymers comprising at least two bisphenol A units, said fraction being substantially free of monomers;

determining a polymer concentration in the high molecular weight fraction of each analytical sample using the concentration detector;

determining the molar mass in the high molecular weight fraction of each analytical sample using the molar mass detector; and

deriving an average molecular weight for each analytical sample based on the polymer concentration and the molar mass;

wherein the total analysis time is not greater than about 5 minutes per sample.

31. (twice amended) A system for the determination of polymer average molecular weight, comprising:

a solvent delivery system;

an autoinjector for injecting a known volume of an analytical sample comprising a polymer reaction product of a diphenyl carbonate and a dihydric phenol;

a chromatographic column for effecting a minimally dispersive separation of the analytical sample to yield a high molecular weight fraction substantially free of monomers;

an in-line concentration detector for determining a polymer concentration in the high molecular weight fraction; and

a molar mass detector off-line from the column and concentration detector, for determining the molar mass in the high molecular weight fraction;

wherein the system's total analysis time is not greater than about 5 minutes per sample.

Please cancel claims 22 and 33 without prejudice or disclaimer.

Please add the following new claims 38 to 43.

38. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a baseline peak width less than about 30 seconds.

39. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a baseline peak width less than about 20 seconds.

40. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a baseline peak width less than about 10 seconds.

41. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a peak width at half height less than about 10 seconds.

42. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a peak width at half height less than about 5 seconds.

43. (new) The method of claim 28, wherein the minimally dispersive separation yields a high molecular weight fraction having a peak width at half height less than about 3 seconds.

#### REMARKS

Claims 1, 4 to 21, 23 to 29, 31 to 32, 34 to 36 and 38 to 43 are pending.

Claims 1 to 3, 9 to 29, 31 to 33, 36 and 37 were rejected under 35 U.S.C. §103(a) over Miroslav and Nielsen et al. and claims 4 to 8, 30, 34 and 35 were rejected under 35 U.S.C. §103(a) over Miroslav, Nielsen et al. and Fyvie et al.

Claim 1 has been amended to claim a method for determination of polymer molecular weight comprising a step of "determining off-line... molecular mass... on a diverted high molecular weight fraction" and claim 31 has been amended to a system for the determination of polymer average molecular weight comprising an "off-line" molar mass detector. Support for the amendments is found in the specification at page 10, lines 22 to 29 and Figure 2. The specification at page 10, lines 22 to 29 states: